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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,994	12/30/2000	Shuvranshu Pokhariyal	42390P10364	9840

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EXAMINER

JACKSON, JAKIEDA R

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,994

Applicant(s)

POKHARIYAL ET AL.

Examiner

Jakieda R Jackson

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-21** are rejected under 35 U.S.C. 102(e) as being Schmid et al. (U.S. Publication No. 2002/0143529), hereinafter referenced as Schmid.

Regarding **claims 1, 9, 12 and 15**, Schmid discloses a method, machine-readable medium, apparatus and system, hereinafter referenced as a "system" comprising:

creating a rule-based grammar (column 5, paragraph 0070) having a wildcard identifier in place of a predefined category of words (wildcard transition; figure 3, element 326);

defining rules (rule interpreter; figure 2, element 214) to produce artificial combinations of unique sounds in a language (phoneme; column 6, paragraph 0088 with 0084), where each artificial combination represents a pronunciation of the words (paragraph 0088) in the predefined category (set of selected phrases; column 1, paragraph 0003), and represents a generic word (dictation grammar) that is defined in

a speech engine's vocabulary database (column 1, paragraph 0008 with column 3, paragraph 0034);

generating a set of artificial combinations of unique sounds (phoneme; column 6, paragraph 0088 with paragraph 0092 and 0095) by substituting the wildcard identifier with the rules (column 8, paragraph 0112); and

in response to human speech specifying a wildcard word, determining a number of potential words spoken by the user by finding the generic words (dictation grammar; column 1, paragraph 0008) and non-generic words (optional word "please"; column 3, paragraph 0041) that phonetically match the wildcard word (column 7, paragraph 0095), and then assigning each of the words a confidence level (plus or minus with high and low confidence level; column 7, paragraph 0095).

Regarding **claims 2, 10, 13, 16 and 20**, Schmid discloses a system, wherein the rule-based grammar comprises a context-free grammar (CFG) (context-free grammar engine; figure 2, element 202).

Regarding **claims 3 and 7** discloses the system additionally comprising selecting a non-generic word (plus) having the highest confidence level (highest confidence level; column 7, paragraph 0095).

Regarding **claims 4, 8, 11, 14, 17 and 19**, Schmid discloses a system wherein a unique sound in a language comprises a phoneme (column 6, paragraph 0088 with column 7, paragraph 0092).

Regarding **claims 5 and 21**, Schmid discloses the system wherein said generating a set of artificial combinations of unique sounds (phonemes; column 6,

paragraph 0088 with column 7, paragraph 0092) by substituting (substitutes) the wildcard identifier (entire state diagram) with the rules (column 4, paragraph 0045 with column 5, paragraph 0068) comprises converting the wildcard rule-based grammar into a standard rule-based grammar (figure 3 with transition from state to state through rules; column 9, paragraph 0129).

Regarding **claim 6**, Schmid discloses a method comprising:

specifying a wildcard context-free grammar (CFG)(figure 2, element 202), which includes a wildcard identifier in place of a predefined category of words (column 8, paragraph 0112 and 0113), each of which are defined in the speech engine's vocabulary database (column 3, paragraph 0034);

specifying a set of rules (setting the PRON) that define artificial combinations of unique sounds in a language (phoneme), where each artificial combination represents a pronunciation of the words (pronunciation of words) in the predefined category (column 6, paragraph 0088 with column 7, paragraph 0090-0092 and column 1, paragraph 003), and corresponds to a generic word that is defined in a speech engine's vocabulary database (column 3, paragraph 0034);

converting the wildcard CFG file into a recognized CFG grammar file (figure 3) by generating a set of artificial combinations of unique sounds based on the rules (phonemes; column 6, paragraph 0088 with paragraph 0092); and in response to human speech having one or more spoken units (speech recognition engine; figure 2, element 204), generating a results object (results produced) having a number of generic words (given number; column 9, paragraph 0117) corresponding to artificial

combinations appropriate to a given spoken unit (phoneme), and having a number of non-generic words (optional words; column 3, paragraph 0041) in the speech engine's vocabulary database appropriate to a given spoken unit (column 3, paragraph 0034), each generic word and non-generic word having an associated confidence level (column 7, paragraph 0095).

Regarding **claim 12**, it is interpreted and rejected for the same reasons as set forth in claim 1. In addition, Schmid discloses an apparatus comprising:

at least one processor (processing unit; figure 1, element 120); and
a machine-readable medium (computer readable instructions/media) having instructions encoded thereon, which when executed by the processor, are capable of directing the processor (column 2, paragraph 0026 and 0027).

Regarding **claim 18**, Schmid discloses a system comprising:

a conversion module (figure 3) to accept a wildcard rule-based grammar file as input, and to convert the wildcard rule-based grammar file to a set of artificial combinations of unique sounds in a language (phoneme; column 6, paragraph 0088 with column 7, paragraph 0092);

a speech engine (figure 2, element 204) to accept human speech having a wildcard word as input (column 8, paragraph 0112), and to determine a number of potential words matching the wildcard word (column 7, paragraph 0095), the potential words comprising a number of generic words (dictation grammar; column 1, paragraph 0008) corresponding to the artificial combinations of unique sounds in a language

(phoneme; column 6, paragraph 0088 with column 7, paragraph 0092), and a number of non-generic words (optional words; column 3, paragraph 0041); and

a speech adapter (network interface; figure 1, element 170 with column 3, paragraph 0033) to interact with the speech engine by querying the speech engine for potential words matching the wildcard word (represent phrases), and by returning the word most likely to match (determines the likelihood) the wildcard word spoken by the user (column 3, paragraph 0034).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Nelson et al. (U.S. Patent No. 6,243,713) discloses multimedia document retrieval by application of multimedia queries to a unified index of multimedia data for a plurality of multimedia data types.
- Brill (U.S. Publication No. 2004/024584) discloses a linguistic disambiguation system and method using string-based pattern training to learn to resolve ambiguity sites.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R Jackson whose telephone number is 703.305.5593. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 5:00p.m.


Application/Control Number: 09/752,994
Art Unit: 2655

Page 7

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703. 305.4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRJ
August 13, 2004



W. R. YOUNG
PRIMARY EXAMINER